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| TRANSMITTAL FORM <i>(to be used for all correspondence after initial filing)</i> | Applicati n Numb r | 10/646,612 | |
| | Filing Date | 08/22/2003 | |
| | First Named Inventor | Kenneth COLLINS, et al. | |
| | Group Art Unit | N/A | |
| | Examiner Name | Unknown | |
| Total Number of Pages in This Submission | 9 | Attorney Docket Number | 8401 04 |

| ENCLOSURES (check all that apply) | | |
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| <input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment / Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/ Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53 | <input type="checkbox"/> Assignment Papers (for an Application) <input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____ | <input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input type="checkbox"/> Other Enclosure(s) (please identify below): |
| Remarks | | |

| SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT | |
|---|-----------------------------------|
| Firm or Individual name | Robert M. Wallace Reg. No. 29,119 |
| Signature | |
| Date | 09/18/2003 |

| CERTIFICATE OF MAILING | | |
|--|-------------|-------------|
| I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, Washington, DC 20231 on this date: September 18, 2003 | | |
| Typed or printed name | Shelly Hart | |
| Signature | | Date |
| | | 09/18/2003 |

CERTIFICATE OF MAILING

I hereby certify that this paper and every paper referred to therein as being enclosed is deposited with the U.S. Postal Service as first class mail, postage prepaid, in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

on September 18, 2003 (Date of Deposit)



PATENT

Attorney Docket No. 8401 04

RW Ref. No. APM/001-02-CP4

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)
Kenneth COLLINS, et al.) Group Art Unit: Unknown
)
Entitled: PLASMA IMMERSION ION) Examiner: Unknown
IMPLANTATION PROCESS USING A)
CAPACITIVELY COUPLED PLASMA SOURCE)
HAVING LOW DISSOCIATION AND LOW)
MINIMUM PLASMA VOLTAGE)
)
Serial No.: 10/646,612)
)
Filing Date: August 22, 2003)

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97(b)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Attached hereto is Form PTO-1449 listing documents believed relevant to the subject application. It is respectfully requested that these documents be made of record and an initialed copy of each form be returned to the undersigned.

No representation is made that more pertinent material is not available or should not be considered by the Examiner. It is expected that the Patent and Trademark Office will independently conduct a complete search of appropriate art. Furthermore, no admission is being made that these documents are prior art, and applicant reserves the right to challenge any such consideration.

It is believed that this disclosure complies with the requirements of 37 CFR 1.56, 1.97, and 1.98, and the Manual of Patent Examining Procedures, section 609 and 707.05. If for some reason the Examiner considers otherwise, it is respectfully requested that the undersigned be called so that any deficiencies can be remedied.

A copy of each document is enclosed unless indicated otherwise. Some of the documents may have markings on them. No significance is meant to be attached to the markings. These documents are not necessarily analogous art.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Robert M. Wallace", with a long horizontal flourish extending to the right.

Robert M. Wallace
Registration No. 29,119
Attorney for Applicants

Dated: 09-18-2003

Robert M. Wallace
Patent Counsel
2112 Eastman Avenue, Suite 102
Ventura, CA 93003
(805) 644-4035

INFORMATION
DISCLOSURE
STATEMENT BY APPLICANT

Sheet 1 of 6



Application Number: 10/646,612
Filing Date: August 22, 2003
First Named Inventor: Kenneth COLLINS, et al.
Group Art Unit: Unknown
Examiner Name: Unknown
Attorney Docket Number: 008401 04

U. S. PATENT DOCUMENTS

| Examiner Initials | Document No | Publication Date | Name of Patentee or Applicant of Cited Document | Class | Subclass | Filing Date |
|-------------------|--------------|------------------|---|-------|----------|-------------|
| | US-2,344,138 | 03-14-1944 | DRUMMOND | 117 | 107 | 05-20-1940 |
| | US-3,109,100 | 10-29-1963 | GECEWICZ | 250 | 219 | 05-19-1960 |
| | US-3,576,685 | 04-27-1971 | SWANN ET AL. | 148 | 187 | 03-15-1968 |
| | US-3,907,616 | 09-23-1975 | WIEMER | 148 | 188 | 08-16-1974 |
| | US-4,116,791 | 09-26-1978 | ZEGA | 204 | 192 | 05-18-1977 |
| | US-4,382,099 | 05-03-1983 | LEGGE ET AL. | 427 | 34 | 10-26-1981 |
| | US-4,385,946 | 05-31-1983 | FINEGAN ET AL. | 148 | 175 | 06-19-1981 |
| | US-4,434,036 | 02-28-1984 | HOERSCHELMANN ET AL. | 204 | 164 | 05-03-1982 |
| | US-4,465,529 | 08-14-1984 | ARIMA ET AL. | 148 | 188 | 06-04-1982 |

FOREIGN PATENT DOCUMENTS

| Examiner Initials | Foreign Patent Document | Publication Date | Country | Name of Patentee or Applicant of Cited Document | Translation? (Yes/No/n/a) |
|-------------------|-------------------------|------------------|---------|---|---------------------------|
| | EP 0 546 852 A1 | 16.06.1993 | EUROPE | CHARLES ZAROWIN ET AL. | N/A |
| | EP 0 836 218 A2 | 15.04.1998 | EUROPE | SERGIO EDELSTEIN ET AL. | N/A |
| | EP 0 964 074 A2 | 15.12.1999 | EUROPE | ALEC DENHOLM ET AL. | N/A |
| | EP 1 111 084 A1 | 27.06.2001 | EUROPE | JAMES BERNSTEIN ET AL. | N/A |
| | EP 1 191 121 A1 | 27.03.2002 | EUROPE | MICHELANGELO DELFINO | N/A |

NON PATENT LITERATURE DOCUMENTS

| Examiner Initials | |
|-------------------|--|
| | Zhang, B.C., and Cross, R.C., "A high power radio frequency transformer for plasma production," <i>Rev. Sci. Instrum.</i> , Vol. 69, No. 1, pp. 101-108, January 1998. |
| | U.S. Patent Application Serial No.: 09/638,075, filed August 11, 2000, entitled, "EXTERNALLY EXCITED TORROIDAL PLASMA SOURCE," By Hiroji Hanawa, et al. |

Examiner's Signature:

Date Considered:

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INFORMATION
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Application Number: 10/646,612
Filing Date: August 22, 2003
First Named Inventor: Kenneth COLLINS, et al.
Group Art Unit: Unknown
Examiner Name: Unknown
Attorney Docket Number: 008401 04

U. S. PATENT DOCUMENTS

| Examiner Initials | Document No | Publication Date | Name of Patentee or Applicant of Cited Document | Class | Subclass | Filing Date |
|-------------------|--------------|------------------|---|-------|----------|-------------|
| | US-4,481,229 | 11-06-1984 | SUZUKI ET AL. | 427 | 38 | 06-20-1983 |
| | US-4,500,563 | 02-19-1985 | ELLENBERGER ET AL. | 427 | 38 | 12-15-1982 |
| | US-4,521,441 | 06-04-1985 | FLOWERS | 427 | 38 | 12-19-1983 |
| | US-4,539,217 | 09-03-1985 | FARLEY | 427 | 10 | 06-27-1984 |
| | US-4,565,588 | 01-21-1986 | SEKI ET AL. | 148 | 186 | 10-10-1984 |
| | US-4,698,104 | 10-06-1987 | BARKER ET AL. | 437 | 141 | 03-02-1987 |
| | US-4,764,394 | 08-16-1988 | CONRAD | 427 | 38 | 01-20-1987 |
| | US-4,778,561 | 10-18-1988 | GHANBARI | 156 | 643 | 10-30-1987 |
| | US-4,867,859 | 09-19-1989 | HARADA ET AL. | 204 | 298 | 08-04-1987 |
| | US-4,871,421 | 10-03-1989 | OGLE ET AL. | 156 | 643 | 09-15-1988 |
| | US-4,912,065 | 05-27-1990 | MIZUNO ET AL. | 437 | 141 | 05-26-1988 |
| | US-4,937,205 | 06-26-1990 | NAKAYAMA ET AL. | 437 | 165 | 08-04-1988 |
| | US-4,948,458 | 08-14-1990 | OGLE | 156 | 643 | 08-14-1990 |
| | US-5,061,838 | 10-29-1991 | LANE ET AL. | 219 | 121.59 | 06-23-1989 |

FOREIGN PATENT DOCUMENTS

| Examiner Initials | Foreign Patent Document | Publication Date | Country | Name of Patentee or Applicant of Cited Document | Translation? (Yes/No/n/a) |
|-------------------|-------------------------|------------------|---------|---|---------------------------|
| | JP 59-218728 | 10.12.1984 | JAPAN | UNKNOWN | NO |
| | JP 59-86214 | 18.5.1984 | JAPAN | UNKNOWN | NO |
| | JP 62-120041 | 1.6.1987 | JAPAN | UNKNOWN | NO |
| | WO 93/18201 | 16.09.2003 | WIPO | FELCH ET AL. | N/A |

NON PATENT LITERATURE DOCUMENTS

| Examiner Initials | |
|-------------------|--|
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Date Considered:

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INFORMATION
DISCLOSURE
STATEMENT BY APPLICANT

Sheet 3 of 6



Application Number: 10/646,612
Filing Date: August 22, 2003
First Named Inventor: Kenneth COLLINS, et al.
Group Art Unit: Unknown
Examiner Name: Unknown
Attorney Docket Number: 008401 04

U. S. PATENT DOCUMENTS

| Examiner Initials | Document No | Publication Date | Name of Patentee or Applicant of Cited Document | Class | Subclass | Filing Date |
|-------------------|--------------|------------------|---|-------|----------|-------------|
| | US-5,106,827 | 04-21-1992 | BORDEN ET AL. | 505 | 1 | 02-05-1991 |
| | US-5,107,201 | 04-21-1992 | OGLE | 324 | 72.5 | 12-11-1990 |
| | US-5,270,250 | 12-14-1993 | MURAI ET AL. | 437 | 165 | 12-23-1991 |
| | US-5,277,751 | 01-11-1994 | OGLE | 156 | 643 | 06-18-1992 |
| | US-5,290,382 | 03-01-1994 | ZAROWIN ET AL. | 156 | 345 | 12-13-1991 |
| | US-5,312,778 | 05-17-1994 | COLLINS ET AL. | 437 | 225 | 11-23-1990 |
| | US-5,354,381 | 10-11-1994 | SHENG | 118 | 723 | 05-07-1993 |
| | US-5,435,881 | 07-25-1995 | OGLE | 156 | 345 | 03-17-1994 |
| | US-5,505,780 | 04-09-1996 | DALVIE ET AL. | 118 | 723 | 03-18-1992 |
| | US-5,514,603 | 05-07-1996 | SATO | 437 | 16 | 05-06-1994 |
| | US-5,520,209 | 05-28-1996 | GOINS ET AL. | 137 | 246 | 12-03-1993 |
| | US-5,542,559 | 08-06-1996 | KAWAKAMI ET AL. | 216 | 67 | 02-14-1994 |
| | US-5,561,072 | 10-01-1996 | SAITO | 437 | 24 | 11-21-1994 |
| | US-5,569,363 | 10-29-1996 | BAYER ET AL. | 204 | 192.32 | 10-25-1994 |
| | US-5,572,038 | 11-05-1996 | SHENG ET AL. | 250 | 492.21 | 05-07-1993 |

FOREIGN PATENT DOCUMENTS

| Examiner Initials | Foreign Patent Document | Publication Date | Country | Name of Patentee or Applicant of Cited Document | Translation? (Yes/No/n/a) |
|-------------------|-------------------------|------------------|---------|---|---------------------------|
| | WO 99/00832 | 07.01.1999 | WIPO | DONALD SMITH ET AL. | N/A |
| | WO 01/11651 A1 | 15.02.2001 | WIPO | LEONARD MAHONEY ET AL. | N/A |
| | WO 02/25694 A2 | 28.03.2002 | WIPO | JAMES BERNSTEIN ET AL. | N/A |

NON PATENT LITERATURE DOCUMENTS

| Examiner Initials | |
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INFORMATION
DISCLOSURE
STATEMENT BY APPLICANT

Sheet 4 of 6



Application Number: 10/646,612
Filing Date: August 22, 2003
First Named Inventor: Kenneth COLLINS, et al.
Group Art Unit: Unknown
Examiner Name: Unknown
Attorney Docket Number: 008401 04

U. S. PATENT DOCUMENTS

| Examiner Initials | Document No | Publication Date | Name of Patentee or Applicant of Cited Document | Class | Subclass | Filing Date |
|-------------------|--------------|------------------|---|-------|----------|-------------|
| | US-5,587,038 | 12-24-1996 | CECCHI ET AL. | 156 | 345 | 06-16-1994 |
| | US-5,627,435 | 05-06-1997 | JANSEN ET AL. | 315 | 111.21 | 02-15-1996 |
| | US-5,648,701 | 06-15-1997 | HOOKE ET AL. | 315 | 111.21 | 06-28-1994 |
| | US-5,654,043 | 08-05-1997 | SHAO ET AL. | 427 | 527 | 10-10-1996 |
| | US-5,674,321 | 10-07-1997 | PU ET AL. | 118 | 723 | 04-28-1995 |
| | US-5,683,517 | 11-04-1997 | SHAN | 118 | 723 | 06-07-1995 |
| | US-5,711,812 | 01-27-1998 | CHAPEK ET AL. | 118 | 723 | 06-06-1995 |
| | US-5,718,798 | 02-17-1998 | DEREGIBUS | 156 | 429 | 04-10-1996 |
| | US-5,770,982 | 06-23-1998 | MOORE | 333 | 32 | 10-29-1996 |
| | US-5,897,752 | 04-27-1999 | HONG ET AL. | 204 | 192.12 | 05-20-1997 |
| | US-5,911,832 | 06-15-1999 | DENHOLM ET AL. | 118 | 723 | 01-09-1997 |
| | US-5,935,077 | 08-10-1999 | OGLE | 600 | 504 | 08-14-1997 |
| | US-5,944,942 | 08-31-1999 | OGLE | 156 | 345 | 03-04-1998 |
| | US-5,948,168 | 09-07-1999 | SHAN ET AL. | 118 | 723 | 10-09-1997 |
| | US-5,994,236 | 11-30-1999 | OGLE | 438 | 728 | 01-23-1998 |

FOREIGN PATENT DOCUMENTS

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INFORMATION
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Sheet 5 of 6



Application Number: 10/646,612
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|-------------------|-----------------|------------------|---|-------|----------|-------------|
| | US-5,994,236 | 11-30-1999 | OGLE | 438 | 728 | 01-23-1998 |
| | US-5,998,933 | 12-07-1999 | SHUN'KO | 315 | 11.51 | 04-06-1998 |
| | US-6,020,592 | 02-01-2000 | LIEBERT ET AL. | 250 | 492.21 | 08-03-1998 |
| | US-6,041,735 | 03-28-2000 | MURZIN ET AL. | 118 | 723 | 03-02-1998 |
| | US-6,050,218 | 04-18-2000 | CHEN ET AL. | 118 | 723 | 09-28-1998 |
| | US-6,076,483 | 06-20-2000 | SHINTANI ET AL. | 118 | 723 | 03-26-1998 |
| | US-6,101,971 | 08-15-2000 | DENHOLM ET AL. | 118 | 723 | 12-22-1998 |
| | US-6,132,552 | 10-17-2000 | DONOHUE ET AL. | 156 | 345 | 02-19-1998 |
| | US-6,150,628 | 11-21-2000 | SMITH ET AL. | 219 | 121.54 | 06-26-1997 |
| | US-6,164,241 | 12-26-2000 | CHEN ET AL. | 118 | 723 | 06-30-1998 |
| | US-6,165,376 | 12-26-2000 | MIYAKE ET AL. | 216 | 67 | 01-05-1998 |
| | US-6,182,604 B1 | 02-06-2001 | GOECKNER ET AL. | 118 | 723 | 10-27-1999 |
| | US-6,237,527 B1 | 05-29-2001 | KELLERMAN ET AL. | 118 | 723 | 08-06-1999 |
| | US-6,239,553 B1 | 05-29-2001 | BARNES ET AL. | 315 | 111.51 | 04-22-1999 |
| | US-6,291,938 B1 | 09-18-2001 | JEWETT ET AL. | 315 | 111.51 | 01-24-2000 |

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Sheet 6 of 6



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Group Art Unit: Unknown
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|-------------------|--------------------|------------------|---|-------|----------|-------------|
| | US-6,300,643 B1 | 10-09-2001 | FANG ET AL. | 250 | 492.21 | 12-06-1999 |
| | US-6,305,316 B1 | 10-23-2001 | DIVERGILIO ET AL. | 118 | 723 | 07-20-2000 |
| | US-6,335,536 B1 | 01-01-2002 | GOECKNER ET AL. | 250 | 492.3 | 10-27-1999 |
| | US-6,339,297 B1 | 01-15-2002 | SUGAI ET AL. | 315 | 111.21 | 07-21-1999 |
| | US-6,341,574 B1 | 01-29-2002 | BAILEY III ET AL. | 118 | 723 | 11-15-1999 |
| | US-6,348,126 B1 | 02-19-2002 | HANAWA ET AL. | 156 | 345 | 08-11-2000 |
| | US-6,403,453 B1 | 06-11-2002 | ONO ET AL. | 438 | 513 | 07-27-2000 |
| | US-6,410,449 B1 | 07-25-2002 | HANAWA ET AL. | 438 | 706 | 08-11-2000 |
| | US-6,418,874 B1 | 07-16-2002 | COX ET AL. | 118 | 723 | 05-25-2000 |
| | US-6,433,553 B1 | 08-13-2002 | GOECKNER ET AL. | 324 | 464 | 10-27-1999 |
| | US-6,453,842 B1 | 09-24-2002 | HANAWA ET AL. | 118 | 723 | 08-11-2000 |
| | US-6,468,388 B1 | 10-22-2002 | HANAWA ET AL. | 156 | 345.48 | 08-11-2000 |
| | US-6,494,986 B1 | 12-17-2002 | HANAWA ET AL. | 156 | 345.35 | 08-11-2000 |
| | US-6,514,838 B2 | 02-04-2003 | CHAN | 438 | 513 | 06-27-2001 |
| | US-6,551,446 B1 | 04-22-2003 | HANAWA ET AL. | 156 | 345.48 | 08-11-2000 |
| | US-6,559,408 B2 | 05-06-2003 | SMITH ET AL. | 219 | 121.57 | 05-10-2002 |
| | US 2001/0042827 A1 | 11-22-2001 | FANG ET AL. | 49 | 00 | 07-27-2001 |
| | US 2002/0047543 A1 | 04-25-2002 | SUGAI ET AL. | 315 | 111.21 | 10-10-2001 |

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